

ABSTRACT OF THE DISCLOSURE

In an electromagnetic fuel injector of an internal combustion engine, an electromagnetic coil for valve driving is to be wound on a bobbin, and the bobbin is constituted by a synthetic resin containing a filler having good heat conductivity. For example, the bobbin with the coil to be wound thereon is constituted by PPS containing iron oxide and/or alumina as a filler. Two types of electromagnetic coils different in characteristics are provided in the fuel injector. These coils are wound separately on one bobbin in an axial direction. Among them, one coil (hereinafter referred to as "first coil") has a winding region near a movable unit with a valve element being the object of magnetic suction, and other coil (hereinafter referred to as "second coil") has a winding region away from the movable unit.

The bobbin has a step difference of the outer diameter so that the bobbin outer diameter in the region with the second coil to be wound thereon is smaller than the bobbin outer diameter in the region with the first coil to be wound thereon, and the bobbin inner diameter has a step difference in that the bobbin inner diameter in the region with the first coil to be wound thereon is made large partially so as to secure an annular space to interpose a seal ring therein.